NOTE ON THE VERY YOUNG STAGE OF THE GENUS *HUMPHREYIA*.

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Whilst on a visit to England in the summer of 1907, Mr. C. Gabriel very kindly placed in my hands for examination a small Mollusc which he regarded as the very young form of *Humphreyia Strangei*. It was obtained by dredging in about 4 fathoms, on 4th December, 1905, off Phillip Island, Western Port Bay, Victoria, on a stony bottom, and associated with *Clavagella multangularis*, Tate.

I regret that beyond giving a description of its superficial characters I am at present not in a position to furnish any detailed information respecting its internal organization. Dr. Ridewood, who very kindly examined the unique specimen, found that the state of preservation was not sufficiently good to justify any expenditure of time in the way of a minute study. He suggested that the collector should be prevailed upon to endeavour to secure a complete series of specimens, from the youngest stage to the full-grown, when the working out of the anatomical details would be a matter of much interest. It is to be hoped, therefore, that Mr. Gabriel may have the opportunity some day of acting on Dr. Ridewood's suggestion, and that a good series of specimens may thus become available for investigation by the anatomist.

Humphreyia Strangei, juv.

Shell very small, 5 mm. long, 4 high, consisting only of two flattish valves which are placed over the dorsal end of the ovate-globose body of the animal, covering only a limited portion of it, and

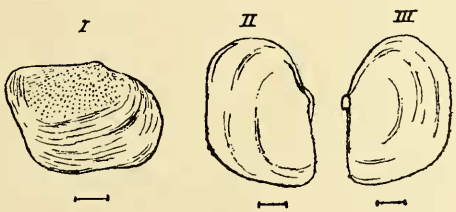
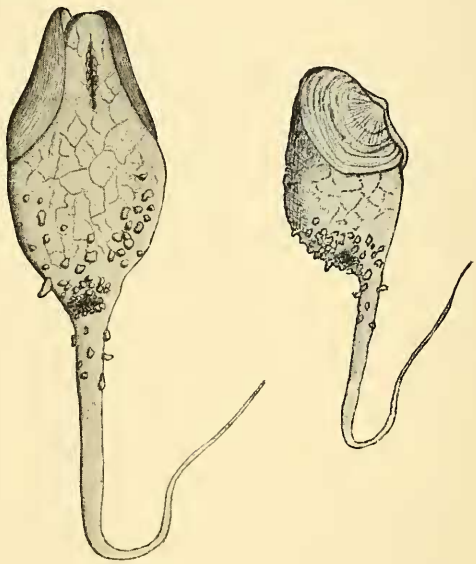


Fig. I, right valve, exterior; Fig. II, right valve, interior; Fig. III, left valve, interior, showing hinge-ligament.

diverging at the umbones at about a right angle. They appear to be closely attached to the surface, and exhibit, within, faint anterior to posterior adductor scars. Externally the valves are covered with

a thin, pale, olivaceous periostracum, which is more apparent towards the outer margin than at the umbones. The surface exhibits fine yet quite distinct lines of growth, radiating series of minute granulations towards the umbones, and faint traces of radiating sculpture upon the rest of the valves. In form they rather resemble *Mya truncata* in miniature, being somewhat quadrate, obliquely truncate behind, and more rounded in front. The beaks, although minute, terminate in a white rounded boss; they are contiguous, and inclined slightly anteriorly. The anterior dorsal margin is obliquely excurved, the posterior being parallel with the ventral, but slightly incurved. The hinge is edentate, and consists merely of a ligament attached just below the extreme margin of the valves posterior to the umbones. This ligament has a distinct shelly lining which is slightly convex on the underside, truncate, and broad at the hinder end, and narrowed in front. Interior of the valves white, almost silvery, concentrically wrinkled here and there.



The body of the animal is enclosed in a sack-like mantle, is soft, ovate-globose, terminating posteriorly in a thin whip-like process. The surface of the swollen part exhibits a sort of reticulation which may be merely the wrinkling of the delicate outer skin. Also numerous siliceous particles are adherent to the surface. This, however, is probably only an accidental feature. Two openings are observable, both apparently ventral, judging by the position of the shell. The anterior, situated between the ventral margins of the valve, is narrow and elongate. The posterior is at the other end of the body, near the commencement of the slender prolongation. It appears to be small

and transverse, and at this part the siliceous grains were very numerous.

The anterior slit may correspond to the pedal opening which is present in the animal of *Brechites*, and the posterior to the siphonal end of that genus. What may be the function of the flagelliform extension of the body I cannot offer an opinion upon. Can it possibly be an anchoring appendage? The adductor muscles are distinctly visible at the dorsal end of the body. On slitting the mantle the gills were seen to be very large, whereas both the foot and papi were minute. Length of swollen portion of the body about 10 mm., of the prolongation about 15 mm.

From the above description, brief as it is, it will be seen that the general features of this genus practically correspond to those of *Brechites* as described by Lacaze-Duthiers.[1]

It is a matter of speculation at what period the animal commences to form the tube, but it seems probable that it would increase considerably before this takes place.

A fanciful account of the development of *Brechites* was given by Dr. J. E. Gray in the Ann. Mag. Nat. Hist., 1858, vol. i, pp. 423–6.

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[1] Arch. Zool. Expérim., sér. II, vol. i, pp. 665–732, pls. xxv–ix.